Amendments to the Specification:

Please replace the title with the following amended title:

METHOD AND APPARATUS FOR MANUFACTURING PARTIALLY DIFFUSING OPTICAL FIBERS

Please replace the paragraph beginning at page 12, line 23, with the following rewritten paragraph:

-- Another preferred embodiment of the present invention incorporates one or more lasers to fabricate partially diffusing illuminating fibers. By strong focusing of the laser beam and working with short pulse, high-energy systems it is possible to generate defects inside the bulk of a transparent fiber. **Fig.3** shows the inclusion of a laser manipulation source into the manufacturing process. Since a laser beam can be coupled through quartz windows, the setup is of less complexity than the inclusion of an ion implantation facility into fiber tube **304**. It is even possible to work without tube evacuation. As in figure 2, a preform is heated in oven **302** and fiber **306** is drawn through clean tube **304**. Laser beam **308** originates from laser source **300** and is suitably shaped by optical system **310** in order to obtain previously described focal point **104**, which is illustrated in **Fig. 1**. From interaction zone **312,** beam **308** is guided into beam dump **314**. As before, heating elements **316** may be included in the process to condition the fiber for enhancement.--

Please replace the paragraph beginning at page 13, line 8, with the following rewritten paragraph:

-- In a most preferred embodiment, several fiber enhancement devices are brought in-line to produce a continuous length of partially diffusing optical fiber. **Fig.4** illustrates the general setup of a preferred apparatus for producing partially diffusing optical fibers. The starting point is oven **402** from which a zone of molten preform is drawn via drawing means **410** to produce optical fiber **406** through clean tube **404** that protects fiber **406** from pollution. Tube **404** maybe evacuated to allow the various process steps for the fiber manufacturing. Heating elements **408** can be used to change fiber **406** diameter for each unit length element. Heating elements **408**

further serve to prepare the fiber for enhancement by ion-implanter **420** or laser **422.** The details of these processes have been described in previous preferred embodiments. Vapor unit **414** serves to generate a second cladding if desired, or may be used to otherwise chemically treat fiber **406**. This second cladding can fulfill scattering operations or contribute to higher fiber performance in general. Earlier described processes for fiber enhancement may also be included or repeated after the vapor-coating step. Drawing means **410**, ion-implanter **420**, laser **422**, vapor unit **414**, and any other enhancement device may be optionally connected to a controller such as computer **412** to control draw speed and control the enhancement means to create desired patterns along the fiber. Finally, fiber **406** is provided with a polymer coating by coating means **416.** The polymer must be appropriately chosen in order to withstand the scattered radiation and to enhance the fiber flexibility. Polymer-coated partially diffusing fiber **418** of commercial lengths can then be prepared for end use.--